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APPLICATION FOR UNITED STATES LETTERS PATENT

Title:

SOFT-SIDED CARRYING CASE WITH STOWABLE SHOULDER STRAPS AND  
WAIST BELT

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**SOFT-SIDED CARRYING CASE WITH  
STOWABLE SHOULDER STRAPS AND WAIST BELT**

**CROSS REFERENCE TO RELATED APPLICATION**

[0001] This application is a non-provisional application claiming priority from Provisional Application Serial No. 60/399,037, entitled "Soft-Sided Carrying Case with Stowable Shoulder Straps and Waist Belt" filed July 26, 2002, for all commonly disclosed subject matter.

**TECHNICAL FIELD**

[0002] The present invention generally relates to soft-sided carrying cases, and more specifically, to soft-sided carrying cases having stowable shoulder straps and hip or waist belt.

**BACKGROUND**

[0003] Soft-sided luggage or soft-sided carrying cases are generally well known in the art. Soft-sided carrying cases typically offer one or more distinct advantages over conventional luggage. For example, soft-sided luggage is typically lighter in weight than conventional luggage, and thus soft-sided carrying cases may be particularly well suited for carrying a number of different items. Moreover, soft-sided carrying cases often add wheels, allowing the case to be used similar to a luggage cart.

[0004] Many consumers, however, desire the additional flexibility of wearing the soft-sided carrying case as a backpack. Thus, it is known to include shoulder straps on such cases so that the user may wear the case as a backpack. Furthermore, for added stability and comfort, a waist or hip belt may be provided which fits snugly around the user's waist or hips. Unfortunately, as with many additional options, care must be taken so that the carrying case does not become overly cumbersome.

[0005] Therefore, despite the popularity of known soft-sided carrying cases or luggage, there is a continuing need for improvements in the art.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0006] Certain features and advantages in the apparatus disclosed and claimed herein will become apparent to those skilled in the art upon reading the following description in conjunction with the drawing figures, in which:

[0007] Fig. 1 is a perspective view of a soft-sided carrying case assembled in accordance with the teachings of an embodiment of the invention and shown being worn by a user;

[0008] Fig. 2 is a rear elevational view of the soft-sided carrying case of Fig. 1 with a pair of shoulder straps and a waist belt in the stowed position;

[0009] Fig. 3 is a side elevational view of the soft-sided carrying case showing the stowage flap in the partially open configuration;

[0010] Fig. 4 is a bottom perspective view of the soft-sided carrying case showing the stowage flap in the fully open configuration;

[0011] Fig. 5 is a side elevational view of the soft-sided carrying case of Fig. 4;

[0012] Fig. 6 is a rear elevational view of the soft-sided carrying case showing the stowage flap in the fully open configuration, and showing the waist belt partially unfolded;

[0013] Fig. 7 is a rear elevational view of the soft-sided carrying case showing the stowage flap in the fully open configuration, and showing the waist belt fully unfolded; and

[0014] Fig. 8 is a perspective view of the soft-sided carrying case assembled in accordance with the teachings of an embodiment of the invention and configured to be used with optional wheels and a telescoping handle.

### DETAILED DESCRIPTION

[0015] Although the following text sets forth a detailed description of numerous different embodiments of the invention, it should be understood that the legal scope of the invention is defined by the words of the claims set forth at the end of this patent. The detailed description is to be construed as exemplary only and does not describe every possible embodiment of the invention since describing every possible embodiment would be impractical, if not impossible. Numerous alternative embodiments could be implemented, using either current technology or technology developed after the filing date of this patent, which would still fall within the scope of the claims defining the invention.

[0016] It should also be understood that, unless a term is expressly defined in this patent using the sentence "As used herein, the term '\_\_\_\_\_' is hereby defined to mean..." or a similar sentence, there is no intent to limit the meaning of that term, either expressly or by implication, beyond its plain or ordinary meaning, and such term should not be interpreted to be limited in scope based on any statement made in any section of this patent (other than the language of the claims). To the extent that any term recited in the claims at the end of this patent is referred to in this patent in a manner consistent with a single meaning, that is done for sake of clarity only so as to not confuse the reader, and it is not intended that such claim term be limited, by implication or otherwise, to that single meaning. Finally, unless a claim element is defined by reciting the word "means" and a function without the recital of any structure, it is not intended that the scope of any claim element be interpreted based on the application of 35 U.S.C. § 112, sixth paragraph.

[0017] Referring now to Fig. 1 of the drawings, a soft-sided carrying case assembled in accordance with the teachings of the present invention is generally

referred to by the reference numeral 10. The soft-sided carrying case 10 generally includes two sidewalls 10A and 10B, a front wall 10C, a back wall 10D, a bottom wall 10E, and a top wall 10F. In the configuration shown in Fig. 1, and as will be described in greater detail below, a pair of shoulder straps 16 and a hip or waist belt 18 may be deployed to allow the carrying case 10 to be carrier in a fashion similar to a backpack.

[0018] The soft-sided carrying case 10 may include a handle 12, which in the disclosed embodiment shown may be extendable, and when used in conjunction with a plurality of wheels 14 (visible in FIGS. 2 and 3) will enable the soft-sided carrying case 10 to be wheeled in a fashion similar to a luggage cart as shown in Fig. 8. The handle 12 may be made of commercially available materials of the type commonly used in the art, and further will preferably have a telescoping handle 12a enabling the entire handle 12 to be stowed in the carrying case 10. The wheels 14 are preferably commercially available wheels commonly employed in the luggage industry. In-line skate style wheels using sealed ball bearings and other commercially available wheels may also be used.

[0019] Referring now to Fig. 2 through Fig. 7, there is illustrated the carrying case 10 in various stages of deployment from a configuration with the shoulder straps 16 and waist belt 18 in a stowed position (Fig. 2), to a configuration with the shoulder straps 16 and waist belt 18 in an exposed position, but with the waist belt 18 folded (Fig. 4) to the shoulder straps 16 and waist belt 18 in a fully deployed position (Fig. 7). Specifically, as is shown in Fig. 2, the carrying case 10 is illustrated in a rear elevational view with the shoulder straps 16 and waist belt 18 in the fully stowed position. The soft-sided carrying case 10 preferably includes a stowage flap 20. The stowage flap 20 includes a top edge 20A, a bottom edge 20B, and a pair of

interconnecting side edges 20C, 20D. The bottom face 20B of the stowage flap 20 is joined to the back wall 10D of the carrying case 10 at a first hinge line 22. The hinge 22 permits pivotal movement of the stowage flap 20 between the closed or folded position shown in Fig. 2 and an open or unfolded position shown in Figs. 4 - 7.

[0020] The stowage flap 20 further includes faces 21A, 21B. In the preferred environment of use, the face 21A may be referred to as a outer face, while the face 21B may be referred to as a inner face.

[0021] It will be appreciated that the hinge line 22 may be one of a number of alternatives known in the art. For example, the hinge line 22 may be a line of stitching, such as a bartack stitching for greater durability in high stress areas. Other types of hinge lines may be, for example rather than limitations, a line of piping or a zipper such as a heavy duty #8 or #10 taped, clean coil zipper. Furthermore, it will be understood that these alternatives are equally applicable to any other hinge line described hereinafter.

[0022] The soft-sided carrying case 10 preferably includes a zipper 24 which engages each of the back wall 10D and at least a portion of the edges 20A, 20B, 20C of the stowage flap 20 in order to secure the stowage flap 20 in its closed position such as is shown in Fig. 2. Upon release of the zipper 24, the stowage flap 20 may be pivoted about its hinge line 22 to its respective unfolded positions as shown in Fig. 3 through Fig. 7.

[0023] Instead of the zipper 24 it will be appreciated that alternate closure mechanisms may be provided in order to secure the stowage flap 20 to the back wall 10D. At least some of these possible alternate mechanisms are discussed herein with respect to other forms of preferred embodiments. It will be understood that the

closure mechanisms of the various embodiments may be readily substituted for each other as would be appreciated by those of skill in the art.

[0024] Referring now to Figs. 3, 4, 5 and 6, the soft-sided carrying case 10 is illustrated with the zipper 24 opened and the stowage flap 20 either partially pivoted about the hinge line 22 (as shown in Fig. 3) or fully pivoted about the hinge line 22 (as shown in Figs. 5 and 6) to expose the shoulder straps 16 and waist belt 18. The stowage flap 20 may include a securing flap 26. The securing flap 26 includes a top edge 26A, a bottom edge 26B, and a pair of interconnecting side edges 26C, 26D. The bottom edge 26B of the securing flap 26 is joined to the top edge 20A of the stowage flap 20 at a second hinge line 29. The hinge 29 permits pivotal movement of the securing flap 26 between the closed or folded position shown in Fig. 2 and an open or unfolded position shown in Figs. 3 - 7.

[0025] The securing flap 26 may loop through a handle 28, attached to the bottom wall 10E of the carrying case 10, to secure the stowage flap 20 in the opened position. The securing flap 26 will preferably be securable about the handle 28 using a section of flexible material which is joinable using hook and loop closures 31 or similar material as it known in the art. By looping the securing flap 26 around the handle 28 in the above-described manner, the stowage flap 20 is not only held securely open, it also may provide, when configured as shown in Fig. 1, protection to the wheels 14. Further, in the disclosed example, the stowage flap 20 serves as a support structure for the waist belt 18 when used as described below. The handle 28 may also function as a foot permitting the carrying case 10 to stand on end.

[0026] Referring specifically to Fig. 7, the waist belt 18 includes a plurality of panels 30A, 30B, 30C, 30D, 30E. The panels 30A, 30B, 30C, 30D, 30E are preferably padded and may be constructed as separate units, for example, as separate

panels joined together as is known in the art, or for ease of manufacturing the panels may be one continuous panel unit. The panel 30C of the waist belt 18 is joined to the inner face of the stowage flap 20 by a panel 32. It will be appreciated that the panel 32 may also be padded to provide comfort to the lower back of the wearer of the carrying case 10.

[0027] The waist belt 18 further includes ends 33A, 33B and faces 35A, 35B. In the preferred environment of use, the face 35A may be referred to as an outer face, while the face 35B may be referred to as a inner face.

[0028] The waist belt 18 may include a pair of waist belt straps 34A, 34B. The waist belt straps are preferably joined to the outer face 35A of the waist belt 18. The waist belt straps 35A, 35B will preferably be joinable to form a contiguous loop of suitable length to attach around a wearer's waist or hips by a releasable mechanism such as one or more buckles 36A and 36B, which may be, for example, commercially available LiteLock<sup>®</sup> buckles. Furthermore, it will be understood that the waist belt straps 35A, 35B may be constructed as separate units, for example, as separate straps joined to the outer face 35A of the waist belt 18, or for ease of manufacturing the straps may be one continuous strap unit.

[0029] The waist belt 18 preferably includes four waist belt hinges 39A, 39B, 39C, 39D so that the waist belt capable of folding flat within the stowage flap 20 as shown in Fig. 4. By folding into a flat position, the waist belt 18 fits compactly and neatly within the stowage flap 20. For example, the panels 30A, 30B may be convergently foldable about the first waist belt hinge 39A, while the panels 30C, 30D may be convergently foldable about the four waist belt hinge 39D such that the waist belt 18 folds flat against the inner face 21B of the stowage flap 20. The panels 30B, 30D may be pivotable about the waist belt hinges 39B, 39C respectively to allow the waist



belt 18 to rotate away from the inner face 21B of the stowage flap 20 to accommodate users of varying body types and widths.

[0030] In a preferred embodiment, the waist belt hinges 39A, 39B, 39C, 39D may be created by a line of stitching across the width of the waist belt 18. As described above in connection with the hinge 22, the waist belt hinges 39A, 39B, 39C, 39D may alternatively be, for example rather than limitations, a line of piping or a zipper such as a heavy duty #8 or #10 taped, clean coil zipper. Moreover, each panel 30A, 30B, 30C, 30D, 30E may be further constructed of a plurality of separate sub-panels connectively joined together to form the single panel.

[0031] In an alternative configuration shown in Fig. 8, the telescoping handle 12a may be extended, shoulder straps 16 and waist belt 18 may be stowed within the storage flap 20, and the wheels 14 exposed to allow the carrying case 10 to wheeled in a fashion similar to a luggage cart.

[0032] It will also be appreciated that the soft-sided carrying case 10 may include additional compartments, such as side compartments or pockets (not shown) and/or end compartments or pockets (not shown), all of which are commonly used in the art.

[0033] The zippers used herein are preferably heavy duty zippers, of the type commonly used in the art, which zippers preferably have been taped as is known in the art. Further, the soft-sided carrying case 10 may be constructed of any one of a variety of commercially available fabrics and/or materials, all of which may be chosen based on design considerations for the specific application, all of which would be known to those of skill in the art. Rip-stop materials, which are readily available, may also be used.

[0034] In operation, the soft-sided carrying case 10 may be used or transported in the configuration of Fig. 8 with the carrying case 10 in the secured position, and the

telescoping handle 12 a fully extended to allow the carrying case 10 to be wheeled in a fashion similar to a luggage cart. In the illustrated configuration, the shoulder straps 16 and waist belt 18 are in their stowed position. It will be understood that the soft-sided carrying case 10 may be readily assembled using known methods of manufacturing. When it is desired to transport the soft-sided carrying case 10 in the configuration of Fig. 1, the extendable handle 12 should be fully retracted within the carrying case 10 and the shoulder straps 16 and waist belt 18 should be freed from the stowage flap 20.

[0035] To access the shoulder straps 16 and waist belt 18, the zipper 24 may be disengaged so as to free the stowage flap 20. Once unzipped, the stowage flap 20 may be pivoted about the hinge line 22 (Fig. 3) rotating the panel 32 and waist belt 18 into the fully opened position. The securing flap 26 may then be attached about the handle 28 to secure the stowage flap 20 as shown in Fig. 4 and Fig. 5. It will be appreciated that the stowage flap 20 may be secured in any suitable manner as is known in the art including, for example, by use of another zipper or other suitable mechanism. However, in the illustrated embodiment, the security flap 26 is secured around the handle 28 by the hook and loop closure 31. By securing the stowage flap 20 to the carrying case 10, the hip panel 32 is secured to the back wall 10D to provide, in the disclosed example, support to the waist belt 18 and thus minimizing or eliminating the need for any further waist belt support.

[0036] It will further be appreciated that in another alternative embodiment (not shown) the panel 32 and the waist belt 18 may be joined directly to the back wall 10D of the soft-sided carrying case 10. The stowage flap 20, therefore will rotate about the hinge line 22 to expose the waist belt 18, without rotating the panel 32 and waist belt 18. The stowage flap 20 may then be secured to the handle 28 as described above.

[0037] As the stowage flap is secured to the handle 28, access to both the shoulder straps 16 and the waist belt 18 is achieved. The shoulder straps 16 are secured to the carrying case 10 and may be adjusted according to the requirements of the wearer as is well known in the art. The waist belt 18 may be unfolded from the flat, or stowed configuration, to the unfolded position as is shown in Fig. 6 and Fig. 7. Upon unfolding the waist belt 18, the carrying case 10 is ready to be worn as shown in Fig. 7.

[0038] Once the shoulder straps 16 and waist belt 18 are fully deployed and the securing flap 26 is secured to the handle 28, the soft-sided carrying case 10 may be carried in a fashion similar to a backpack. As shown in Fig. 1, the wearer of the backpack may slip his arms through the shoulder straps 16, adjust the shoulder straps 16 according to his or her preference, and alternatively may secure the shoulder straps to the chest by use of a closing mechanism 40. The wearer may then attach the waist belt 18 around the waist or hips, and similarly, the wearer may adjust the waist belt 18 according to his or her preference. The waist belt 18 may then be secured around the wearer using the buckles 36A and 36B to provide the wearer with a simple 4-point harness.

[0039] Also, it will be further appreciated that zippers, buckles, hook and loop closures, and adjustment straps as described above may be replaced and/or substituted with any number of known closing or securing mechanisms, such as, by way of example and not limitation, straps, buckles, snaps, buttons, and other similar hook and loop closure materials.

[0040] Although certain embodiments of a soft-sided carrying case have been disclosed and described herein in accordance with the teachings of the present invention, the scope of coverage of this patent is not limited thereto. On the contrary,

this patent covers all embodiments of the teachings of the invention fairly falling within the scope of the appended claims, either literally or under the doctrine of equivalents.